

## AUSTRALIAN TINGIDÆ (Hemiptera)

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Since the publication in 1925 of "RESULTS OF DR. E. MJOBERG'S SWEDISH SCIENTIFIC EXPEDITIONS TO AUSTRALIA 1910-1913," Horváth, ARKIV FOR ZOOLOGI, considerable interest has been taken in the Tingidæ of Australia. Most of the papers on these Australian insects have been published by Hacker and by Drake and coworkers.

The present paper contains the descriptions of ten species and notes on a few other species. Illustrations of two species described by Horváth are also included. The writer is indebted to the officials of the Stockholm Museum for the privilege of studying type specimens of certain species described by the late Doctor Horváth. The types of the new species described below are in the Drake collection, and are largely from the H. H. Hacker collection of Australian Hemiptera.

## NATHERSEA MACULOSA Horváth

*Nethesia maculosa* Horváth, Ark. Zool., 17 (24): 15, 1925, fig. 9.

Type, female, Broome, in Stockholm Museum. Head ferruginous, pitted, with four short testaceous spines; hind pair appressed, extending forward as far as middle of eyes, front pair shorter, with tips directed inward. Eyes large, black. Rostral channel very wide, open behind; laminæ rather wide, testaceous, uniseriate, clothed with bristly hairs; rostrum not reaching middle of mesosternum. Hypocostal ridge uniseriate, the areolæ small. Pronotum strongly convex, shiny, the pits moderately large; lateral carinæ almost obsolete on disc, distinct on hind process, there testaceous; paranota narrow, keel-like behind, wider and uniseriate in front, there reflexed upward and testaceous; collar distinct, scarcely raised, areolate.

The above notes were taken from the type. It was difficult to trace the lateral carinæ on the disc, although visible with good light. In front the carinæ are distinct and whitish.

Male: Longer and slenderer than female; lateral carinæ distinct on disc, there (as in female) concolorous with pronotal disc. Antennæ and legs clothed with stiff, bristly hairs.

## PARACOPIUM SUMMETVILLEI (Hacker)

*Teloneimia summervillei* Hacker, Mem. Queens. Mus., 9 (1): 22, 1927, Pl. IV, fig. 4.

Described from Palm Island, N. Q.; two paratypes studied. Breeds on *Scoevola Koenigii* Vahl. Other specimens examined: 4 from Dunk Island, Aug. 27, 1927; 3 from Bowen, Queensland, June 21, 1930; 2 from Prince Wales Island, Torres, St. Austr.; and one from New Hebrides, March 15, 1943, collected by P. W. Oman.

## LEPTOPYPHA ANCEPS (Horváth)

*Paracopium anceps* Horváth, Ark. Zool., 17 (24): 9, 1925,

The type (male), Yarrabah, and two males, Dunk Island, Aug. 1927, have been examined. The third segment of the antennæ is smooth, slenderest and slightly more than twice as long as IV. The pronotum is coarsely pitted as in *L. hospita* Drake and Poor from the Philippines and *L. suppura* Drake from Japan.

**Tingis impensa**, n. sp., Plate 24, fig. a

Large, obovate, dark brown. Head tumid above, dark ferruginous, with five stout, dark ferruginous spines, the median and hind pair of spines directed upward, the front pair shorter, rather long, with their tips touching. Rostrum long, extending on venter; laminae parallel, not widely separated, open behind. Thorax beneath brown, the venter yellowish. Antennæ ferruginous-brown; segment I short, much stouter and twice as long as II; III broken off some distance from base. Eyes rather large, red. Legs brown. Orifice present. Hypocostal ridge uniseriate.

Pronotum sharply, transversely convex, coarsely pitted, tricarinate; median carinae uniseriate, sharply angulately raised on disc, there biseriate and with a narrow, transverse, areolate laminae; lateral carinae long, concave within and slightly more widely separated anteriorly. Collar raised areolate; without distinct hood; paranota rather wide, strongly reflexed, widest opposite humeri, there four areolate deep and somewhat flaringly produced, triseriate in front. Elytra widest along basal half, completely overlapping in repose; costal area moderately wide, biseriate along basal third, thence uniseriate; subcostal area biseriate; discoidal area large, narrowed at base and apex, widest at middle, there about eight areolae deep, the outer boundary sinuate.



PLATE 23

*Tingis virigata* Horvath

Length, 3.65 mm.; width, 1.40 mm.

Type, female, Tasmania, taken by Dr. J. W. Evans.

This species differs from all other members of the subgenus *Tingis* in the peculiar, transverse, areolate, plate-like structure of the median carinae and the stout, erect median and hind pair of cephalic spines. The type is figured.

***Tingis hurdaë*, n. sp., Plate 25**

Large, obovate, yellowish brown, the pronotum and a very broad transverse band on elytra darker reddish brown. Head short, brown, with five, stout, testaceous spines; median spine erect; hind pair appressed, extending a little beyond middle of eyes; front pair diverging laterally, somewhat curved upward; eyes large, reddish. Rostrum long, extending on metasternum; rostral laminae parallel on mesosternum, widely separated and

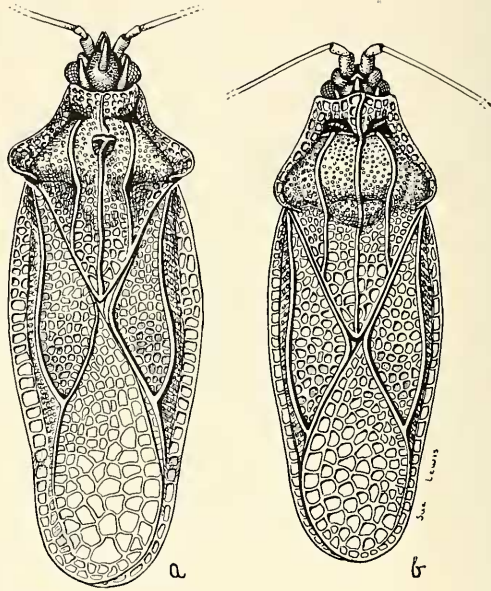


PLATE 24

a. *Tingis impensa* n. sp.;

b. *Tingis myobergi* Horvath

concave within on metasternum, widely open behind. Bucculae rather long, broad, testaceous, meeting in front. Antennae rather long, indistinctly pilose; segment I and II dark brown, short, the former much stouter and twice as long; III light brown, three times as long as IV; IV short, fusiform, mostly black. Abdomen beneath brown, the mesosternum black.

Pronotum longly convex, very coarsely pitted, tricarinate, each carinae uniseriate, the areolae tiny; lateral carinae diverging anteriorly, broadly concave within in front; hood and collar testaceous, the hood small, inflated, tectiform, slightly protruding in front; carinae testaceous, moderately broad, reflexed almost upright, mostly biseriate, uniseriate behind. Orifice present. Hypocostal ridge uniseriate. Elytra completely overlapping behind in repose; costal area wide, mostly biseriate, triseriate in widest part; subcostal area largely triseriate; discoidal area long, narrowed at base and apex, six areolae deep in widest part. Legs yellow brown.

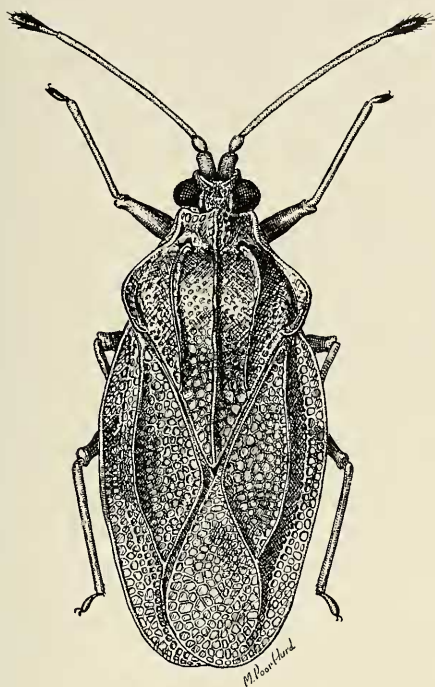


PLATE 25

*Tingis hurda*, n. sp.

Length, 4.25 mm.; width, 1.85 mm.

Type (male), Queensland, Australia, taken by H. Hacker. The type is figured.

This species (subgenus *Tingis*) is broader than other members of the subgenus *Tingis*; the high carinae, spines and pale trum and wide paranota are distinguished characters. Named in honor of the artist, Dr. Margarat Poor Hurd, who has illustrated many Tingidae and published numerous papers on the family.

***Tingis aemula*, n. sp.**

Elongate-ovate, testaceous, the pronotum reddish brown; head brown, with five, long, slender, brownish spines, the surface of

head and spines beset with pale hairs. Antennæ long, slender, brown, clothed with pale, bristly hairs; segment I short, much stouter and less than twice as long as II; III very long, straight, much more than three times as long as IV, the latter subclavate. Eyes rather small, transverse, reddish. Bucculæ broad, closed in front, areolate, brownish testaceous. Rostrum extending a little beyond mesosternum; channel wide, the laminæ testaceous, not meeting behind. Legs brown, setose. Body beneath reddish brown.

Pronotum moderately, longly convex, coarsely pitted, tricarinate; carinæ strongly foliaceous, high, mostly uniseriate, the areolæ rectangular, upright; hood small, faintly projecting anteriorly, paranota subequal in width to height of carinæ, reflexed, biseriate, testaceous. Elytra, carinæ, paranota and collar clothed with pale, somewhat recumbent hairs, their margins and also principal nervures of elytra with pale, shorter, recurved bristly spines or hairs. Elytra with tips slightly separated in repose; costal area moderately wide, biseriate, the areolæ clear; subcostal area biseriate; discoïdal area long, extending beyond middle of elytra, narrowed at both ends, widest at middle, there four areolæ deep, the boundary nervures raised and spinose.

Length, 3.00 mm.; width, 1.20 mm.

Type, female, Oldea, South Australia, collected by A. M. Lea.

This species may be separated from other Australian members of the subgenus *Tingis* by the high carinæ, spines and pale hairs on veins.

### ***Tingis mui*ri**, n. sp.

Moderately large, brownish. Head black, with short, testaceous spines. Antennæ brown, nearly as long as pronotum, indistinctly pilose; segment I short, stouter and nearly twice as long as III; III a little more than twice as long as IV, the latter mostly black and pilose. Rostrum long, nearly reaching end of channel; laminæ testaceous, areolate. Hypocostal ridge uniseriate. Orifice present.

Pronotum moderately convex, pitted, distinctly tricarinate, the carinæ slightly lower on disc, the lateral pair concave within in front of disc; collar truncate in front, narrow, raised, biseriate; hood absent; calli dark, deep; paranota narrow, reflexed upward, uniseriate, narrower opposite humeri. Elytra slightly narrowed posteriorly, constricted behind middle; costal area narrow, mostly uniseriate, biseriate in front, the areolæ very small; subcostal area



wider, biseriate, discoidal area large, about two-thirds as long as elytra, widest near middle, there seven or eight areolæ deep; sutural area large, more widely areolate.

Length, 3.45 mm.; width, 1.15 mm.

Type (male), allotype (female) and 3 paratypes, Coolangata, Queensland, Aug. 1919, taken by Muir.

This insect may be distinguished from the members of the subgenus *Tropidocheila* by the low carinæ, narrow paranota and nearly uniform color of reticulations.

### **Tingis acris**, n. sp.

Small, grayish testaceous, with dark fuscous markings. Head dark castaneous, with five testaceous spines, the median short, sometimes wanting; hind pair longest, appressed. Antennæ moderately long, indistinctly pilose, testaceous, the terminal segment blackish; segment I short, stouter and slightly longer than II; III longest, two and one-half times the length of IV. Rostrum extending to middle of mesosternum; laminae foliaceous, areolate, not meeting behind. Bucculæ broad, contiguous in front. Body beneath brown. Orifice prominent. Hypocostal ridge narrow, uniseriate.

Pronotum transversely convex, pitted, sharply tricarinate; carinæ uniseriate, the areolæ indistinct in front, the lateral carinæ more widely separated and concave within in front; paranota reflexed upward, biseriate; collar raised, truncate in front, with small hood. Elytra with wide, transverse band near middle of costal and subcostal areas, most of discoidal and sutural areas dark fuscous; costal area narrow, uniseriate; discoidal area large, extending beyond middle of elytra, widest near middle, there seven or eight areolæ deep. Carinæ on disc dark fuscous.

Length, 2.20 mm.; width, 0.90 mm.

Type (male), allotype (female) and 2 paratypes, Benakin, Queensland, March 17, 1933, H. Hacker. This is species belonging to the subgenus *Tropidocheila* and is smaller than other species described herein.

### **Tingis perkensi**, n. sp.

Moderately large, grayish testaceous, variegated with brown to fuscous. Head brown, with five short, sharp spines, the hind pair appressed, the median short, erect. Eyes transverse, reddish. Rostral channel narrow, open behind, the laminae testaceous; ros-

trum brownish, reaching middle of metasternum. Bucculae testaceous.

Orifice prominently rimmed. Hypocostal ridge uniseriate. Legs testaceous, the tarsi dark. Antennae moderately long, testaceous, indistinctly pilose; segment I short, stout, scarcely longer than II; III, about two and one-half times the length of IV; IV thickened, blackish.

Pronotum transversely convex, coarsely pitted, tricarinate; lateral carinae sharply raised, non-areolate, slightly diverging anteriorly, slightly convex within before disc; median carinae slightly more elevated, indistinctly areolate; hood rather small, areolate, roundly produced in front, somewhat flattened above; paranota narrow, reflexed, biseriate. Elytra constricted beyond middle, completely overlapping behind; costal area moderately wide, biseriate; subcostal area biseriate; discoidal area impressed, narrowed at base and apex, closely areolate, widest near middle, there seven or eight areolate deep; sutural area large, more widely reticulate.

Length, 3.00 mm.; width, 0.95 mm.

Type (male), allotype (female) National Park, Queensland, May, 1929. Paratypes, many specimens, taken with type and from Mt. Glorious, Queensland.

The smaller size and biseriate costal area separate this species from other members of the subgenus *Tingis* occurring in Australia.

### ***Tingis hackeri*, n. sp.**

Head brownish, black, the frontal spines short, the hind pair slender, appressed. Rostrum extending beyond mesosternum; laminae foliaceous, areolate, testaceous, not meeting behind. Antennae moderately long, pilose, testaceous, the terminal segment blackish; segment I short, stout, stouter and slightly longer than II; III longest, two and one-half times the length of IV. Rostrum extending beyond middle of metasternum; laminae foliaceous, areolate, not meeting behind. Bucculae broad, contiguous in front. Body beneath brown. Orifice prominent, with an elongate hypocostal ridge.

Pronotum transversely convex, brown on disc; carinae prominent indistinctly areolate, the lateral distinctly constricted behind disc, longly concave within in front; hood moderately large, scarcely produced in front; paranota narrow, reflected, biseriate. Elytra and paranota clothed with fine rather short hairs; costal



area moderately wide, biseriate; subcostal area narrower, biseriate; discoidal area large, narrow at base and apex, widest at middle, there seven areolæ deep; sutural area more wide areolate. Reticulations yellowish brown, variegated with dark fuscous.

Length, 4.00 mm.; width, 1.60 mm.

Type (male) and allotype (female), National Park, Queensland, December, 1921, H. H. Hacker. Allotype, Mt. Tambourine, Queensland, H. H. Hacker. Four paratypes, taken with types; 1 specimen from Springbrook, Dec. 29 and 1 example, Mackay, Kuttabal, June 10, 1932, W. A. McDougall.

This subpilose species (subgenus *Tingis*) is distinctly larger than *T. perkinsi*, but of same general appearance.

### ***Tingis teretis*, n. sp.**

Small, clothed with short, pale scale-like hairs. Head black, clothed with short, pale, flattened hairs, the front and hind pairs of spines brown, short, the median absent. Antennæ moderately long, clothed with pale, moderately long, somewhat decumbent hairs, segment I very short, thicker and scarcely longer than II, the latter moniliform; III very long, nearly three times as long as IV, IV subclavate, short, black. Rostrum long, reaching on metasternum, the laminae not widely separated, parallel. Legs ferruginous, rather short, clothed with whitish, flattened, somewhat decumbent hairs, the tarsi blackish.

Pronotum dark reddish brown, deeply closely pitted, clothed with white, recumbent, scale-like hairs, tricarinate, truncate in front; carinae low, minutely uniseriate, the outer pair slightly concave within in front; paranota narrow, brown, with minute areolæ in front; collar raised, brown, areolate.

Elytra a little longer than abdomen, moderately constricted beyond the middle, completed overlapping behind in repose; costal area narrow, uniseriate, finely serrate along outer margin, the areolæ small, longer than wide, subcostal area much wider, quadriseriate; discoidal area large, about three-fourths as long as elytra, narrowed at both ends, widest at middle, there six or seven areolæ deep, the outer boundary nearly straight; sutural area large, the areolæ largely apically.

Length, 2.20 mm.; width, 0.90 mm.

Type, male, Ooldea, South Australia, collected by A. M. Lee.

This species, perhaps, belongs to the subgenus *Tingis*, and may be separated at once by the clothing of pale scale-like hairs.

**Froggottia disticha**, n. sp.

Large, brown, without conspicuous color markings. Head rugulose; hind pair of spines absent, the anterior ones greatly reduced, appressed; eyes large, dark, transverse. Antennæ moderately stout, yellowish, indistinctly pilose; segment I short, slightly stouter and a little longer than II, the latter obconical; III straight, two and a half times as long as IV; IV slightly thickened, mostly fuscous black. Bucculæ brown, contiguous in front. Rostrum extending to middle of mesosternum. Hypocostal ridge uniseriate. Legs yellowish brown.

Pronotum moderately convex, coarsely pitted, unicarinate, the lateral carinæ indistinct; paranota very narrow, ridgelike; collar raised, short, areolate. Elytra distinctly constricted before apex; costal area narrow, biseriate in front, uniseriate behind, the areolæ small, round; subcostal area wider, biseriate; discoidal area large, extending to middle of elytra, widest a little behind middle, there five areolæ deep; sutural area large, more widely reticulate.

Length, 3.65 mm.; width, 1.25 mm.

Holotype, female, Cedar Creek, Queensland, Australia, Jan. 25, 1921.

Separated from the olive bug *F. olivina* Horv. by its uniform color, narrower paranota, spines on head and paranotal carinæ.

**Teratocheila accedentis**, n. sp.

Moderately large, brown, with dark fuscous markings, the areolæ hyaline, the margin of elytra and nervures of paranota, carinæ and hood hairy. Head black, with five, moderately large, yellowish brown, hairy spines. Antennæ moderately long, shortly pilose; segments I and II short, stout; III slender, long, four times as long as IV, the latter subclavate, blackish. Rostrum brownish, very long, extending on third or fourth venter. Legs dark brown, shortly hairy. Orifice with distinct rim. Hypocostal ridge uniseriate. Bucculæ long, narrow, areolate, testaceous.

Pronotum broadly transversely convex, coarsely pitted; carinæ foliaceous, uniseriate; median distinctly arched on disc; lateral carinæ becoming higher anteriorly, moderately constricted on disc; paranota wide, evenly rounded, triseriate in widest part. Elytra wide; costal area broad, irregularly triseriate, the areolæ moderately large; subcostal area biseriate; discoidal area very large, more finely reticulate, widest a little behind middle, there eight areolæ deep, sutural area large, becoming more widely areolate behind.

Length, 4.10 mm.; width, 2.00 mm.

Type (female), paratype, Aldgate, Australia, October, 1929, F. E. Wilson.

This is the first record of this genus in Australia. It is larger and the lateral carinæ extend a little farther forward than in *T. peurilis* Drake & Poor from India. *Pyllontocheila cafer* Distant from Africa seems to belong to *Teratocheila*.

**Physatocheila suttoni**, n. n.

*Physatocheila irregularis* Hacker, Mem. Queens. Mus., 9:328, 1929, Pl. XXXIII, fig. 6.

As the specific name of *P. irregularis* Hacker is preoccupied—*Physatocheila irregularis* Montrouziei et Signoret, ANN. Soc. ENT. FR., 1861, p. 68—the name *suttoni* is proposed for Hacker's species. Several specimens of this species were collected by E. Sutton in Queensland.

